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ABSTRACT

At the root of many early childhood bilingual education programs is the widespread belief that the two languages must be used and taught in different contexts, since the failure to do so would inevitably produce a single mixed language. From a study of the results achieved over a ten-year period, it would seem that, if at least one of the languages of the pre-school child is secure as a medium of communication, free language alternation in early childhood education can be used with mixed language populations as a means to promote bilingualism in the kindergarten and primary grades. The language program described in this report encourages free alternation between English and German on the part of teachers and students alike. The force dominating and determining the language alternation is the need to communicate and the desire to please. (Author/VM)

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FREE LANGUAGE ALTERNATION IN EARLY CHILDHOOD EDUCATION

by

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Between the ages of three and eight in the bilingual upbringing of children the influence of the community, and in particular of the school, becomes stronger and stronger. Even at this early age, the school, which may include nursery classes, kindergarten and the early primary grades, can produce a long-lasting influence on the language competence of children.

Introduction

Bilingual education in early childhood has taken a number of different, and often contradictory, forms.[1] They range from the bilingual education of bilingual children in Wales to the unilingual education in another language of children from unilingual homes, as illustrated by the French schooling of children from Montreal English-speaking families in the remarkable St. Lambert experiment.[2]

The purposes of the various programs of bilingual education are not, however, always the same. In some cases, bilingual schooling may be simply a device to assure efficient foreign language learning.[3]

In others, it may be a means of assuring that minorities get at least part of their education in their mother tongue.[4] Or the purpose may be to transfer the medium of instruction from the foreign home language to the national language.[5] Or again, the objective may be the implementation of a national policy of bilingualism which gives the maximum possible chance of revival to a moribund national tongue.[6]

It would be nice to say that the formula adopted reflects the objectives to be attained. But this is unfortunately not always the case. The formulas are often either unenlightened or are based on inapplicable research conclusions arrived at under quite different and non-comparable conditions. By and large, early childhood bilingual education has been instituted as if there were a best formula applicable everywhere and under all circumstances. One of these is based on the widespread belief that the two languages must be used and taught in different contexts, since the failure to do so would inevitably produce a single mixed language. And the greater the difference in contexts, the less the likelihood of mixture.[8] If the child addresses the same person indiscriminately in two languages, he may

remain indifferent to their separate existence.[9] Such alternation is likely to lead to mixed word-associations.[10]

This widespread stricture against language alternation within the same context has determined the teaching pattern of many attempts throughout the world at early childhood bilingualism in school and kindergarten. As a result, elaborate and expensive precautions have sometimes been taken, including even the doubling of staff, to prevent the child from speaking two languages to the same person. The practice must go back more than half a century. In the early 1930s, for example, the multilingual international school in Madrid, which operated in two, three and sometimes four languages with children aged three to five years, required its teachers, in and outside the classroom, to use only one language with the children.[11]

Bilingual educators have blindly accepted the principle of language segregation without always inquiring into the reasons for its application, its relation to such important factors as the number of skills to be maintained, the order in which the languages have

been acquired, the degree of control exercised by the teacher, and the age at which a second or third language was introduced.

The purpose of this paper is to question this claim that language alternation in education is universally harmful. I propose to do so, not by a series of controlled experiments, but by describing a single population which became bilingual through free language alternation in school, without apparent harm, at least over the ten-year period during which it has been observed.

I refer to a mixed population of children of American and German parentage in the city of Berlin. About 50% are children of Berlin residents most of whom speak German at home, about 40% are from American families living in Germany and about 10% from the international community - largely from the Commonwealth. In all, 62% of the children were born in Germany and about 48% make some use of both languages at home. As for the teachers, about half use only German at home, a third use only English and the remainder make some use of two or more languages.

The school, which in the 1960s was re-named after the ill-fated American president J.F. Kennedy, had a student population which passed the thousand mark in 1970. During the decade between 1960 and 1970, this bilingual school has been running an American-German curriculum through the free alternation of two languages - English and German. Although no final academic assessment is possible until the fate of the first graduates is known - after having completed their student careers in unilingual German or American universities - the effects of this type of bilingual instruction, even over a decade, do not seem to have been harmful, as far as anyone has been able to judge. If the reaction of the population is any indication, the educational formula used seems to have been successful, as indicated by the fact, that for 20 vacancies that occur every year in the primary grades, there are between 300 and 400 applications, especially from German families, some of whom apply for a place soon after their child is born.

Because the formula represents a type of bilingual education which has seldom been described, it might be useful here to outline how it has worked out in this

particular case, especially at the kindergarten and early primary levels. Most of the material will be drawn from a study commissioned by the Ford Foundation and followed up by a full-length description which is to appear in a forthcoming book.[12] During this period free language alternation has been encouraged in a number of ways. The teachers, most of whom are in varying degrees bilingual, are free to use either language in their teaching, and in practice alternate considerably between languages within the same lesson. The pupils are also free to use either language in and outside of class, and for many of their activities are grouped in such a way as to promote bilingualism. Their other language is not called the second language or the foreign language, but rather the partner tongue.

The practice of free alternation of languages begins in the first year of kindergarten where a great many occasions are provided for the unilingual child to begin by listening to the partner tongue, before attempting to speak it, and in the early grades to read it and later write in it. Throughout his bilingual school years unobtrusive forces are at work which prevent his language alternation from developing into language mixture.

To understand how the formula works it is necessary to examine (1) how the context of free language alternation has been created, (2) how it is used in the teaching, (3) how the practice promotes learning, (4) the determinants of language alternation in the child's behavior, (5) the linguistic and (6) the educational effects of the formula.

1. *Creating the Context*

In a primary school where children are expected to learn another language largely by associating with other children who speak it, it is important to create a social context which promotes such association.

If children of two different home languages are placed together in the same group, a condition is created in which at least some of the children may profit by the use of their second language. In the JFK School this is the most common type of grouping, promoted even out of class where parents are encouraged to organize outings, parties and picnics for the purpose of mixing the two language groups. The same is done for sports, in which the organizing of American groups to compete against German groups is not permitted; a

German team is never opposed to an American team. Similarly, most classes outside mother tongue classes are bilingual in their grouping.

It is difficult, however, to prevent people with something in common - particularly children - from yielding to the natural tendency of birds of a feather to flock together. When this happens in bilingual schools, it creates language-based cliques and factions which work against the very reason for which some bilingual schools are created. To prevent this, the school encourages the creation of mixed friendship groups.

Much of this mixing is done in class, often through ingenious seating arrangements which break up unilingual conversation groups within the class and enable a learner to call on a partner for help in his second language. Some teachers use permanent arrangements originally arrived at on an informal basis. Others formalize the seating, alternating systematically between one language and the other. Some even change the pairing once a week so that every German child sits beside another English-speaking child at least for a week during the year. Other teachers have children sit

where they wish at the beginning of the year and soon have them select the partners likely to help them most in their other language. This then becomes the permanent seating plan, for which a chart is made. Not only are the learners grouped in various possible ways, but each may be paired language-wise with teachers of different language backgrounds. There is also the question of the grouping of teachers among themselves.[12]

A bilingual group may be taught bilingually or unilingually by teachers who are dominant in either of the languages. Unilingual groups may also be taught by such teachers. In the JFK School all these combinations may be found - mixed language groups with American teachers, mixed language groups with German teachers, German groups with American teachers, German groups with German teachers, American groups with German teachers and American groups with American teachers. In some cases teachers group together to cover the syllabus, and experiments have been made in bilingual team teaching. The predominant grouping, however, is the mixed language class taught by either American or German teachers.[12]

It is possible that all children do not profit equally from free language alternation. That is why the school has prudently grouped children with language problems, children from broken bilingual homes, children unable to separate both languages and those with language blocks into special unilingual groups. Whether or not such a precaution proved to be necessary or desirable has not yet been determined.

Another exception to the practice of bilingual grouping is the organization of language classes in the home language and in the partner tongue. Since the objective is competence in at least one language comparable to that of a monolingual child of the same age, the school population in each grade is divided for purposes of language instruction into mother-tongue groups and partner-tongue groups according to level of competence, the highest level making no distinction between the two languages, that is, the child at this level follows both mother-tongue groups. In the other subjects children are grouped in such a way as to promote bilingualism through free language alternation.

2. *Language Alternation in Teaching*

The bilingual pattern is set from the first days of kindergarten, or as soon as the child enters the school and listens to the teacher alternating between languages. Since the alternation is free, however, it may take on any pattern or proportion, ranging from a single switch of language in mid-period to a continual sentence-by-sentence alternation.

The teacher may give part of the lesson in one language and part in another; he may give part of the material in one language and repeat the same thing in another language; or he may give only a summary in the other language. He may even have the bilingual students do the summary or repetition. He may alternate by period - giving one period in one language and one in the other. Or he may continually alternate between languages throughout the teaching. Although all these techniques are used in the JFK School, it is the latter that is predominant (See Table 1).

The ways in which these techniques are used vary from teacher to teacher. Teachers who teach one period in one language and one in the other sometimes repeat

the same material from a different point of view. Teachers who repeat the same material in the other language within the same class may do so in different ways. For example, in one arithmetic class all pupils, except four, are bilingual, with German as their dominant tongue. The teacher, whose home language is also German, does his teaching in German, but from time to time asks the four English-speaking students if they understood. He then switches entirely to English and all pupils both German and English-speaking automatically switch to English. The assignment is then given in German and completely translated by the teacher into English.[12]

Most teachers, however, prefer to alternate continually, and often freely, between languages. For example, in an elementary science class, with students divided about equally between German and English as home languages, the teacher, whose home language is German, constantly switches from German to English - often translating each question immediately into the other language. Definitions are translated and dictated in both languages; so are all technical terms. When a bilingual German student gives a correct answer to a

question, the teacher may ask him to repeat it in English for the benefit of the English-speaking students.[12]

Another way of applying the technique of constant alternation may be seen in a social studies class. Here there is very little translation, but a constant alternation between English and German although the home language of the teacher is German. One day the teacher may begin the lesson in German, another day in English. After five minutes she may continue in the other language. In asking questions, the teacher will alternate irregularly between English and German. Students reply in either language - often the dominant one.

A third example of the technique of constant alternation may be seen in a first-grade music class. Here the home language of the teacher is English. Much of the time is devoted to singing songs which have been translated into the other language. Songs are sung in each language, and sometimes alternate lines are sung in the other language, if the occasion permits.[12]

3. *Language Alternation in Learning*

The type and extent of free language alternation on the part of the children will greatly depend on their degree of bilingualism.

If they are still mostly monolingual they may eventually yield to the language of the teacher, even though their home language is the dominant one of the class. For example, in a kindergarten class an English-speaking teacher surrounded by monolingual Germans may be playing puppets with a single English-speaking child, who will eventually be joined by his German schoolmates in speaking in English about the puppets.[12]

Even in the early years of the primary school, pupils develop the habit of speaking in either language. For example, in an arithmetic class, where everything including the text is in English, several pupils will consistently ask questions in German, with both the assurance that they will be understood and that they can eventually understand the English replies. In one audio-visual class the lecture was entirely in English, all the student questions in German and all the teacher's answers in English.[12]

Many bilingual students may try consistently to ask and answer questions in the teacher's dominant language. They will not always succeed, however, and when the going gets difficult they will switch, even in mid-sentence, to their own dominant language. Other bilinguals reveal their language dominance by giving all their short questions and answers in their second language, but their longer ones in their mother tongue. Such transitional phenomena may be unconscious.

Some teachers try to structure the distribution of languages in the verbal behavior of the children. For example, in a geography class in the primary school each pupil pairs off with a pupil of the partner group to play a game which consists of finding places on a map.

As a result of all such bilingual activity reciprocal language alternation developed into a common practice, and it was not surprising to find that almost three quarters of the student population sometimes or often got a reply in a language other than the one in which they posed the question, and that 65% of the students stated that they had done the same (See Table 2).

4. *Behavioral Determinants of Language Alternation*

What determines this constant alternation between the two languages which is so typical of the whole school community?

There are several causes, stemming mostly from the natural dynamics of intercommunication. The pattern originates in the behavior of the teacher and is transmitted to the pupil, who extends it to his entire language behavior - in and out of school.

It starts in the kindergarten and extends right up to the final year. In the kindergarten, the bilingual teacher unconsciously tries to sense - to seek out - each child's dominant language in order better to communicate with him. In a kindergarten which may include 80% monolinguals - some 40% for each language - this means a continual alternation between languages. Later in the primary grades the teacher, in an effort to maintain the attention of the entire class, may have to switch languages with some frequency. When she notices, for example, that the four little American girls are not listening to her German explanation, she may unconsciously continue in English, to a point where she

feels that she may be losing the attention of some of the German pupils. Or the switching may be the conscious result of a belief on the part of the teacher that a child should not entirely be deprived of his mother tongue.

The alternation may also depend on the choice of text. If the text is in one language, there may be either a certain amount of translation on the part of the teacher, or a conscious switch to the other language to redress the balance. For example, in a social studies class the bilingual German teacher taught in English because the text in the pupils' hands was German. She posed questions in English on pictures in the text having German captions and obtained replies in both languages. Contrariwise the language of the text may be reinforced by the teaching of the teacher.[12]

The degree of alternation is mostly affected by the presence of monolinguals - and as one goes up the grades these are mostly English-speaking. The arrival of a single monolingual pupil after the school year is already under way can suddenly alter the language distribution of the teaching. For example, an American

child enters school in the primary grades a month after the beginning of the school year. In the social studies period the pupils who are now used to their German teacher's language pattern will, one morning, hear her begin the lesson in English and continue for some time. On her part, the teacher believes that this is necessary in order to make the unilingual newcomer feel at home. But because the newcomer may long remain unilingual, the teacher will continue to repeat herself in English for his benefit.

At the lower primary grades the change in emphasis may work in either direction. For example, in an arithmetic period the text and teaching is in English and the pupil's questions and answers bilingual. But for little Monika the teacher translates her questions into German and it is in German that Monika replies. One day, however, she may find that Monika is answering in English to her at all times. But when little Monika gets mixed up with her figures, the teacher switches back to German. She then continues in English for the benefit of the class. But toward the end of the lesson when she discovers the mischievious behavior of Kurt, Hans, and Trude, she will switch back to German.

What dominates most of this language alternation is the need to communicate, or the desire to please. This practice is then taken up by the students who have sometimes been the beneficiaries. Functionally bilingual children will soon know the dominant language of the teacher and use his language when speaking to him in or out of class. This respect or unconscious reaction to the other person's dominant language is transferred to the child's verbal behavior outside the class. In the street, such bilingual children even in a chance encounter, quickly sense the dominant language of their interlocutor and immediately use it. As soon as a newcomer opens his mouth these children know whether he is using his stronger or his weaker language. If he questions them in his weaker language (German or English) they will politely - and unhesitatingly respond in his other language. In school they will spend a certain amount of their time serving as handy resource persons to classmates whose German or English is not up to par.[12]

Many of these children, although they could pass for native speakers in either language and use both languages in their classroom questions, may still switch to their dominant language under stress, when

tired at the end of class, or when technical words are involved. It is not unusual to listen for half an hour to a child one takes to be a native speaker of English only to find him asking the meaning of a word like *ivory*, which, he is told, means *Elfenbein* in his native German.

This pattern of free alternation is found not only in class; it also dominates all out-of-class activities - sports, meetings of the student council, meetings of the teachers and of the parents. It is, in fact, the bilingual pattern of the community; it is a form of receptive bilingualism in free variation.

One may ask what are the ultimate effects of such a pattern - its advantages and disadvantages. In order to find out, it is necessary to analyze the pattern into its two components. In the first place, there is the assumed freedom of being able at any time to express oneself in the language of one's choice with the assurance of being understood. In the second place, there is the assumption that one may hear the preferred language of the other person.[12]

Some persons see only disadvantages in this continual alternation between languages, claiming that it confuses the children and hinders their mental development. Others can see nothing but advantages, especially when a repetition of the same thing in the other language reinforces that redundancy which is essential to all communication. From the educational point of view of teaching, the crucial question may be whether concepts become clearer when they are expressed in more than one language.

5. *Educational Effects: Comprehension and Basic Skills*

What are the effects of this sort of teaching on the comprehension of subject-matter and the learning of the four basic language skills?

It is remarkable that out of a thousand students in all grades more than three quarters claim to understand everything in German or in English, and less than ten percent have stated that they understand very little of one of these languages. Since the investigation was conducted at the beginning of the school year (September to November), the latter category undoubtedly included a large percentage of newcomers (See Table 3).

As for the acquisition of the four basic language skills of listening, speaking, reading and writing, each is given an early start.

In the kindergarten there is not only the great amount of incidental talk of the teacher and the other children, but also overt teaching of listening through the repeated hearing of stories, looking at puppet sketches, and participating in listening and guessing games with eyes closed. At this level the child is not forced to speak; he is helped to express himself when he wishes. If he is shy, he may put on a mask and play the role of an animal or hide in a box and become a radio or television. Or he may be the voice of the puppets or take part in the dramatization of a favorite story or in the solution of a riddle. If he is not too shy he may be invited to tell the teacher what he has done that morning, while the teacher repeats correctly the same thing. As for vocabulary development at that level, all new words are linked with the child's expi-rience and explained from many angles. The important words, however, are those the child names himself.

In the kindergarten, although there is no teaching of reading as such, much that is done prepares the children for reading both in the mother tongue and in the second language. Stories are read to the children who care to listen as the teacher, who has prepared herself for the story, imitates the emotions it evokes. Some of these stories may even be read by visiting parents. Picture sequences forming a story are "read" by the children from left to right. Children cut out and group pictures of objects whose names begin with the same group of sounds. The children are encouraged to play with their languages - to form new words which rhyme, to find words that begin with the same sound as in their name, and to guess noises, for ear-training.

In the first grade, the children are taught to read in their mother tongue only, work in the second language being exclusively oral. They are also taught to read by a different method from that which is used in teaching them, the following year, to read their partner tongue; it will be global, if German, phono-visual if English, and it is likely to be taught by native primary school teachers.

Although most teachers give their lowest priority to writing, this is the most difficult skill to raise to the proficiency level of the mother tongue. As with reading, it starts with the mother tongue in the first grade, although most background work may be done in the kindergarten, where children sometimes have a wish to write words that mean much to them. Here they are encouraged to make signs with anything that is handy - even sticks and stones - regardless of size.

Writing in the mother tongue is taught in the first grade, the second grade being reserved for beginning writing in the second language. In the third grade the skill may, in a few cases, have developed to a point where the pupil may prefer to do his written work in the second language. The language of the textbook may also be a dominant factor in determining the language which the child will write. A student may always use English in class with a teacher whose dominant language is English; he may nevertheless systematically write his assignments in German.

One of the main functions of any primary school is the control of language - the teaching of the child to

speak and write his mother tongue effectively and correctly. This is a difficult enough undertaking in itself; in a bilingual school it is doubly difficult, not only because there are two languages involved, but also because of the possibility of interference between them.

At the earliest school age, the problems of language mixture, in contradiction to language alternation, largely depend on the entering language behavior of the child, determined for the most part by his home environment. If the parents speak a mixed language, so will the child, for whom it is all one language. From this mixture the teacher has the job of creating two languages.

Real language mixture is the exception rather than the rule in the JFK School since most children come to school with a secure mother tongue. Any correction at the kindergarten level is mostly limited to the mother tongue. Even at that level there seems to be very little grammar mixture. At other levels newcomers will make mistakes in grammar - especially in word-order, but these are immediately corrected.

The area in which one does find a certain amount of interference is in vocabulary. And this should not be surprising, not only because there are so many words, but also because they convey the new concepts and ideas which the school transmits to the learner. Since these may be either in English or in German and not necessarily in both, it is not surprising that an English sentence may contain a German word from time to time, and vice versa.

If a German student uses an English textbook, he may there learn a word for an idea, thing or concept that is new to him. If he wishes to use this concept in an assignment written in German, it is the English word which he may use, since it is uppermost in his mind - the only one he knows. In such cases, some teachers require the students to put such words in quotation marks, indicating that they know it belongs to the other language. This same phenomenon may be observed in the spoken language used in class. A learner speaking nothing but English during the entire class may suddenly use German for one of the key words of the lesson, simply because the textbook in which he has been following happens to be German. It may be German not

necessarily because a German text has been imposed but simply because this English-speaking learner - for one of many reasons - may have chosen it instead of the English text. The motivation is so strong for the pupil to fill in any blanks in his vocabulary that there is a continual process of lexical equalization which results in the steady growth of both languages.

It has often been said that all teachers are language teachers. This is not only because they teach new words and expressions along with the new ideas and concepts which they inculcate into the minds of the young, but also because they may exercise a certain control over the quality of the languages used. In the JFK School the great majority of teachers, no matter what they teach, do a certain amount of language correction - some only in class, a few only in the homework; but most of them correct mistakes when they see or hear them.

A practice which is widespread in the JFK School is that of having one pupil correct the language usage of another. This is usually done between pupils of different native languages - between native Germans and

Americans for example, and it has seemingly been most successful. It is all done in a very friendly way. The practice is sometimes pushed a step further in some classes, when the teacher asks or encourages the students to correct her own second-language mistakes. The practice is most widespread when a newly-arrived American teacher tries to find the German word for something; the native German students are generally all too willing to oblige.[12]

Not all teachers correct language mistakes in the same way. Some simply repeat the form correctly or supply the right word; some give an explanation in the language they happen to be using; others do the explaining in the mother tongue of the learner. Finally, a number of teachers use a variety of "other techniques" such as having any of the other pupils supply the correct form, using student assistants for the purpose, having the pupils find the correct form in the dictionary or in previous lessons, or actually having them practice a remedial exercise in the language laboratory. The long term effect of these language correction practices is a modification in the degree of bilinguality of the instruction.

6. *Linguistic Effects: Degrees of Bilingualism*

What has been the effect of this sort of free alternation in usage on the dominance and distribution of each of the languages involved?

In each of the various groupings, the languages may be distributed in varying amounts and varying patterns. Between the extremes of all German and all English, both languages may be used in any proportion. Some teachers teach mostly in one language; others try to maintain a balance. But the extent to which any one language is used may not depend entirely on the teacher; it also depends on the language behavior of the learners. Almost a third of the students use as much English in class as they do German, about a tenth use only one language, and all the others show some preference (See Table 4).

Except when teaching the language as a subject, most teachers either try to keep a balance between the two languages or use one of the languages most of the time, supplementing the lesson with remarks in the other language. Very few teachers completely exclude the other language in their teaching unless they are

teaching language as such. But most teachers express either bilingual balance or marked dominance; few express weak dominance or unilingualism in their teaching.[12]

Teachers do not always use the same pattern of distribution, however, with all their classes. In some classes they may use mostly German as a counterweight to a textbook which is exclusively in English. Or because the textbook is English, the teacher may do most of her teaching in that language. Therefore, the appropriate measure for determining the distribution of the language throughout the entire classroom activity of the school is not the teacher but the class. By using this measure, we find that more than half the classes tend toward an equal use of both languages (57.4%) and that in more than 32% of the classes one language is dominant (16%) in each. In the remaining 10% of the classes, English dominates in a proportion of two to one, since 3.6% of these subject classes are exclusively English (as against 1.1% all German) and there are also more English classes with slight English dominance.

At all events, there is a clear pattern of language distribution in the teaching, and considering the fact that the choice and amount of each language used is left to the teacher, this pattern has turned out to be surprisingly symmetrical (See Table 1).

Conclusion

From a study of the results achieved over a ten-year period, it would seem that, if at least one of the languages of the pre-school child is secure as a medium of communication, free language alternation in early childhood education can be used with mixed language populations as a means to promote bilingualism in the kindergarten and primary grades. If however the child is linguistically, emotionally or intellectually unprepared for such an adventure, it might seem wise to concentrate on the strengthening of one of his languages before aiming at the objective of a bilingual education.

TABLE 1

PATTERNS OF BILINGUAL TEACHING
General and Non-Language Subjects
Distribution of Languages in Teaching

	TEXTS	G (1.1%)	G^e (16%)	eG (2.3%)	GE (57.4%)	gE (3.6%)	E^g (16%)	E (3.6%)
1	German							
	English							
	Both E&G					1		
	None							
2	German				2			
	English						4	
	Both E&G		5				1	
	None					4	3	
3	German							
	English				4		4	
	Both E&G		1		4		1	
	None			2				
4	German		2		3			
	English				14		3	
	Both E&G		9	2	31		2	
	None	1	6		18		3	4
5	German							
	English						3	1
	Both E&G				8	1		
	None		1		2		1	
6	German		3					
	English	1			2	1		
	Both E&G				1			1
	None				8		1	
	TOTALS:	2	27	4	97	7	26	6

Number of classes using various techniques, combined with seven different patterns of language distribution in teaching and textbook use. Techniques: (1) Part of the lesson in one language, another part in the other language. (2) All material in one language, repetition of the same material in the other language. (3) All material in one language, summary in the other language. (4) Continual alternation from one language to the other. (5) Some periods in one language, some in the other language. (6) Other techniques including explanation by the students of some of material in other language. G (German), G^e (mostly), eG (more); E (English), E^g (mostly), gE (more); GE (equal).

TABLE 2

LANGUAGE ALTERNATION OF A THOUSAND STUDENTS
(Replies given and received in the other language)

		HOME %	NEIGHBORHOOD %	PLAYGROUND %	CLASSROOM %
Reply given in the other language	Never	47.7	57.5	33.0	32.1
	Often	10.6	6.4	13.9	18.1
	Some-times	38.7	32.3	48.6	44.7
	Always	2.2	2.4	2.0	2.2
	No answer	.8	1.4	2.5	2.8
Reply received in the other language	Never	41.4	46.7	23.2	21.2
	Often	16.6	11.1	21.0	26.9
	Some-times	39.8	39.4	51.7	46.7
	Always	1.5	2.0	1.8	2.3
	No answer	.7	.8	2.3	2.9

Percentage of students giving and receiving replies in one language in response to questions in the other.

TABLE 3

DEGREES OF COMPREHENSION

	IN GERMAN	IN ENGLISH
Everything	65.5%	40.6%
Mostly everything	16.8%	37.2%
Not everything	6.1%	10.7%
Very little	7.0%	9.9%
No answer	1.3%	1.6%

Answers of a thousand students to the question of whether they understand everything at school.

TABLE 4

CLASS LANGUAGE USAGE OF A THOUSAND STUDENTS

	G %	G^e %	eG %	GE %	gE %	E^g %	E %
% of students	10.9	18.8	15.2	28.9	5.3	10.8	9.5
	all German	*mostly German*	*more German*	*about equal*	*more English*	*mostly English*	*all English*

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